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State of Louisiana
Statewide Interoperability Executive Committee
<http://www.ohsep.louisiana.gov/interop.htm>

BRANT MITCHELL
CHAIRMAN

SONYA WILEY-GREMILLION
VICE CHAIRMAN

POLICY NAME: NETWORK PATCHING POLICY

POLICY NUMBER: 006

EFFECTIVE DATE: January 27, 2010

Network Patching Policy

I. Purpose

The purpose of this policy is to define a Louisiana Wireless Information Network (LWIN) Interoperability Patch and the operation of a patch.

Due to the existence of disparate systems in the State of Louisiana, the Statewide Interoperability Executive Committee (SIEC) has determined the need for a policy concerning patching these systems to the LWIN. Generally, the patching of LWIN is discouraged during normal operation due to the high risk of significantly degrading availability of system resources. The SIEC encourages agencies to discontinue patches as soon as reasonably possible.

The implementation of the patch hardware, interface, radio, labor, etc. is the responsibility of the requesting member. The State may invoice the member agency for any technical support supplied by State personnel.

Examples of patches that may need to be made are:

- Cross patch to legacy trunk system
- Cross patch to conventional system
- Talk group patch within the LWIN
- Patch to a separate frequency band
- Patch to cell phones/satellite phone

II. Definition

An LWIN Patch is defined as an interface between the LWIN and any non-LWIN radio or audio source to provide audio communications between the disparate systems, or connecting two or more LWIN Talkgroups for interoperability.

Patching can interconnect the LWIN to a PBX or other telephone system, cell systems, the internet, satellite phones or another agency's communication system.

In most cases network patches can be accomplished through dispatch consoles or external devices such as an ACU1000, RIOS or Motobridge.

Two types of approved LWIN Patches are identified in this policy:

1. Temporarily Established Patch.

- A patch that is set up for a specific event, designed to be disconnected at the conclusion of that event.
 - Example 1: Patching a channel from an agency responding from out of state to an LWIN talkgroup to allow interoperable communications.
 - Example 2: A high speed pursuit crossing jurisdictional lines requiring talkgroups from different law enforcement agencies on the LWIN to be patched to allow transparent interoperable communication to the end users.

2. Permanently Established Patch.

- Patch set up without regard to an event, designed to remain in place with no time frame for disconnecting.
 - Example: Fire Departments use of patching to extend the range of Station Alerting Systems to units in the field by patching them to a specific talkgroup on the LWIN system.

III. Procedures and Guidelines

The following guidelines shall be used for an LWIN patch deployment:

Temporary Patches

1. LWIN member agencies will make emergency temporary patches as they identify a need with no prior approval required.
2. Agencies will notify the GOHSEP Communications Desk of any temporary patch enabled that remains in place for more than twelve hours.

Contact Information for the GOHSEP Communications Desk:

225-925-7500 Office
225-925-7501 Fax
commo1.itd@la.gov

3. If a patched talkgroup is proprietary to a specific jurisdiction, the authority of that jurisdiction must sign a Memo of Understanding (MOU) granting use of the proprietary talkgroup(s). In the case of quickly developing situations, verbal authorization may be substituted until an MOU can be created.
4. The patch must function in a technically and operationally consistent manner.
 - The release time between messages should be less than 4 seconds.
 - The audio quality should be a close representation of the original audio as heard on a typical subscriber radio.
 - The audio shall be free of hum, clicks, or other extraneous noise.
 - There shall be no clipping of the first syllables or loss of audio through the patch.
5. Maintenance of the temporary patch and facilities is the responsibility of the member agency.
6. The agency shall continuously monitor and respond to calls on the patch.
7. Although necessary, patches have the ability to degrade the performance of the LWIN system; as such, agencies are requested to disconnect temporary patches as soon as possible.

Permanent Patches

1. Permanent patches will be approved by the SIEC after need has been demonstrated. The LWIN Grade of Service will be considered in the approval of a permanent patch.
2. Permanent patches are to remain active at all times on the talkgroup specified within the Patch Agreement [Appendix A]. This requirement is to provide the public safety users with a consistent and functioning communications path between the radio systems.
3. When utilizing external patching devices or bridging equipment such as an ACU 1000, only one talkgroup will be programmed into a permanently patched LWIN interface radio to ensure the radio remains on the patched talkgroup.
4. The patch must function in a technically and operationally consistent manner.
 - The release time between messages should be less than 4 seconds.

- The audio quality should be a close representation of the original audio as heard on a typical subscriber radio.
- The audio shall be free of hum, clicks, or other extraneous noise.
- There shall be no clipping of the first syllables or loss of audio through the patch.

5. LWIN Statewide talkgroups cannot be permanently patched.

6. Maintenance of a permanent Patch is the responsibility of the member agency.

IV. Network Patch Communications Request

A. Agency to LWIN

When an agency needs to perform a permanent patch or a temporary patch lasting more than twelve hours to LWIN that will be accomplished with no outside assistance, the agency must provide the following information to ESF-2:

- Agency requiring network patch
- Reason for request or event type, i.e. hurricane, floods, fire etc.
- Details of the patch to include type of system, frequency or talkgroup
- All involved agencies requiring interoperability
- Expected duration of event
- Patch Location
- A point of contact including phone number

B. Agency to LWIN requiring assistance

Agencies may request use of the resources from the ESF-2 by providing the following information:

- Agency requiring network patch
- Reason for request or event type, i.e. hurricane, floods, fire etc.
- Details of the patch to include type of system, frequency or talk group
- All involved agencies requiring interoperability
- Equipment required
- Expected duration of event
- Location required/access information
- A point of contact including phone number

C. Patch Deployment Procedure (tactical equipment required)

Upon receiving a WebEOC request for assistance for the use of a network patch where tactical equipment will be deployed, the ESF-2 will be notified and will be responsible for dispatching the tactical equipment to the incident scene.

ESF-2 should follow these deployment procedures:

- Respond to requester with estimated time to retrieve tactical equipment and estimated time to arrive on the incident scene
- Arrange for the tactical equipment to be deployed
- Contact the Incident Commander upon arrival of tactical equipment
- Arrange for the tactical equipment to be set up
- Arrange for the tactical equipment to be removed after the incident is concluded

V. Patch Activation

Some locations may not be equipped with agency radios before the event; therefore, all agencies will be required to bring a portable radio to connect to the tactical equipment command center for the length of the operation. Setup and installation of all radios will occur at location of patch. Agencies are also responsible for providing additional power supplies (i.e. spare batteries, chargers, speaker microphones, necessary cables, etc.) for portable radios, as battery life limits usability of the radio (see Network Patch Limitations below).

The Incident Commander or designee should follow these procedures in accordance with the National Incident Management System (NIMS):

- Avoid using an agency's primary dispatch channel
- Require participating agencies to check in at the command post and provide portable radios and frequency/talk group channels for use during the incident to the Communication Unit Leader (COML)
- Assign radio call sign/designator information to connected agencies
- Instruct ESF-2 on where to setup and operate the tactical equipment if assigned
- Inform ESF-2 which agencies are participating
- Provide ESF-2 with agency provided radios and an Incident Command Structure (ICS) form 205 with the frequency/talk group channels to be used during the incident
- Confer with ESF-2 concerning what command level or other specific talk groups that need to be programmed into the network patch

ESF-2 should follow these procedures:

- Arrange to obtain agency radios and connect to the patch with associated cables
- Select the channel or talk group assigned by the agency
- Assign the requested unit/agency to that channel or talk group as designated by the Incident Commander

VI. Network Patch Deactivation

When interoperable communications are no longer required, agencies should follow these guidelines.

The Incident Commander or designee:

- Make an announcement on the command channel to all commanders to advise them the network patch is being deactivated
- Contact the ESF-2 or console operator to shut down the network patch

Participating agencies:

- Individual agencies are responsible for retrieving the portable radio and associated equipment provided during the operation.

ESF-2:

- Assure agencies retrieve all portable radios
- Take inventory of equipment and note any needing repair or replacement
- Return to pre-response storage location and make the tactical equipment ready for service

VII. Problem ID and Resolution

If an issue or problem is identified during the network patch, ESF-2 shall determine who will take corrective action. If the issue or problem cannot be identified, ESF-2 shall contact the appropriate technical personnel or Parish Emergency Operation Center (EOC) to address the issue or problem.

Any problems discovered during the patch shall be resolved in the following manner:

- The local dispatch center having jurisdiction over the location of the incident reports any problems experienced to the system provider (the agency operating the radio system).

- The Incident Commander or designee will be responsible for ensuring effective resolution of problems that exist with interoperability resources, and notify the local dispatch center of the issues' resolution.

The following guidelines shall govern network patch problem identification and resolution between agencies:

- ESF-2 reports any problems experienced to the The Incident Commander or designee. Agencies using network patches may also report any problems experienced
- The Incident Commander or designee will be responsible for ensuring effective resolution of problems that exist with interoperability resources, and notify the local dispatch center of the issues' resolution

VIII. Network Patch Test Procedures

To ensure that equipment components of the network patch operate properly, each agency will test their resources according to their agency's individual policies and procedures. Below are recommended procedures:

- Representatives from each agency should meet on a regular basis to test communications
- Testing should include deployment, setup, operation, and deactivation of the network patch
- Agency representatives should arrive at the test location to test their ability to communicate with other agencies utilizing the patch.

LOUISIANA WIRELESS INFORMATION NETWORK (LWIN) PERMANENT PATCH AGREEMENT

This Agreement is entered into between _____, and the State of Louisiana, by the State Interoperable Executive Committee (SIEC).

The purpose of this agreement is to authorize permanent voice communications interoperability between LWIN and _____.

I. LWIN Responsibilities

1. **Configuration** – LWIN will configure the system talkgroup/s to provide interoperability within the operational area.
2. **Grade of Service (GOS)** - A permanent Patch is permitted when an acceptable GOS is maintained in the LWIN. For the purposes of this agreement, an acceptable GOS is defined as 99.9%, or busies totaling less than .01% of total calls made in on one 12 hour period. If the Patch causes a negative impact on the LWIN GOS due to radio traffic, LWIN may, at the discretion of the State ESF-2 lead, remotely disable a permanent patch only after attempting to rectify the traffic problem and only after 30 days written notice. However, in the event of an emergency, as determined by ESF-2 or the GOHSEP Office of Interoperability, the patch radio/s may be immediately disabled. The NCC will make a good faith effort to notify the agency in the event of an emergency that necessitates disabling the patch.
3. **LWIN Radio Programming-** LWIN is responsible for providing the LWIN patch radio programming archive, as described in the LWIN Subscriber Agreement, to facilitate this interoperability solution.
4. **LWIN Network Patching Policy** – LWIN will develop the LWIN Network patching Policy for interoperable communications between the LWIN and Agencies needing the services provided by a Patch.

II. Joint Responsibilities

1. **Testing and Acceptance** - Jointly conduct the Patch Functionality Test. The Patch must pass the Patch Functional Test before the patch is enabled for use by subscribers. Both parties shall receive results of these tests.
2. **LWIN Network Patching Policy** – Operate Patches in accordance with LWIN Network patching Policy.

III. Agency Responsibilities

1. **Radio/Patch Equipment** – The Agency shall purchase and provide all necessary Patch radio and/or dispatch equipment.
2. **Coordinate Dispatch Console Programming** – The Agency shall coordinate dispatch console programming necessary to patch the agency equipment to the LWIN console radio.
3. **Establish the Communications Protocol** – The Agency shall establish an appropriate protocol for effective communications through the patch. The protocol will be in accordance with established National Incident Management System (NIMS) standards.
4. **Patch Maintenance** – The Agency has the sole responsibility for maintenance and repair work associated with agency equipment. Permanent patches shall be repaired and maintained within 24 hours response. Temporary patches must be repaired in time frame consistent with the Agency's needs or requirements.
5. **Permanent Patch Operation** - The Agency continuously shall monitor and respond to calls on the patch, and operate the patch in accordance with the LWIN Network Patching Policy.

IV. NOTICES TO LWIN OR AGENCY

All notices given under this Agreement, except for emergency requests, shall be made in writing. All notices shall be sent to the parties as follows:

Agency: Name: _____
Contact: _____
Address _____
Address _____
City, State, Zip _____

GOHSEP: Louisiana Governor's Office of Homeland Security and Emergency Preparedness
Office of Interoperability
Attention: Brant Mitchell
7667 Independence Blvd.
Baton Rouge, LA. 70806

V. TERMINATION

Either party may terminate this Agreement by giving thirty (30) days' advance written notice to the other party.

SIGNATURE PAGE FOLLOWS

PATCH AGREEMENT SIGNATURE PAGE

AGENCY

By: _____

Title:* _____

Date: _____

*Execution of this Agreement by the Agency may only be made by a duly authorized representative of the local unit of government.

LOUISIANA WIRELESS INFORMATION NETWORK

By:

LWIN designee

Date: _____

Please send signed Patch Agreement to:
Louisiana Governor's Office of Homeland Security and Emergency Preparedness
Office of Interoperability
7667 Independence Blvd.
Baton Rouge, LA 70806
Attention: Assistant Deputy Director of Interoperability